CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 87-105

WASTE DISCHARGE REQUIREMENTS FOR:

TONNESEN PET CEMETERY
SUISUN CITY, SOLANO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. Mr. Gary Tonnesen, the site legal owner and operator, hereinafter referred to as the discharger, by application dated June 12, 1987 has applied for a permit to operate an animal disposal operation.

2. The animal disposal operation, as shown on Attachment A, which is incorporated herein and made a part of this Order, is located approximately one half mile south of the Highway 12 on Scally Road southeast of Suisun City in Solano County.

3. The discharger disposes of approximately 1500 dogs and cats per month. The animals are buried in mass in pits approximately 15 feet x 10 feet x 10 feet deep. The discharger covers each load of animals upon disposal with a foot of fill with a final minimum cover of two feet.

4. This operation has been operating since April 1983 having filled approximately 1.5 acres of the 15 acre site at a disposal rate of approximately 400 cubic yards of animal remains per year. The current disposal area is Phase 1 of a three phase plan, as shown on Attachment A. The projected life span of this facility has been estimated to be 40 years.

5. The site is also located within the Secondary Management Area of the Suisun Marsh. The San Francisco Bay Conservation and Development Commission (BCDC) has reviewed this operation and found that it is an animal waste disposal facility and not a cemetery [February 24, 1981 (Appeal No. 3-80)]. BCDC concluded that this operation resembles an animal waste disposal facility far more than it does any commonly accepted concept of a cemetery. Cemeteries are generally characterized by a certain formality, by landscaping, and usually by individual plots marked by headstones. On the other hand, the only thing this development has in common with a cemetery is the nature of the remains to be buried. In every other respect, it is a solid waste disposal facility. The animal remains are brought to the site from all over the Bay Area and Sacramento in refrigerated trucks and placed in the pits. Pet owners are not allowed to visit the common pits.

6. The potential impact from this disposal operation is similar to the impact from a Class III Waste Management Unit that is used to dispose of municipal refuse.

7. The discharger has submitted a report entitled "Hydrogeologic Investigation Report, Dog Disposal Operation, Suisun City, California", dated October, 1986. The report, prepared by J. H. Kleinfelder & Associates, documents that the site is underlain by sandy to clayey silts to depths of 10 to 20 feet. These deposits are underlain by approximately 10 feet of silty sands which are underlain by clays.

8. The usable ground water beneath the disposal site occurs at depths from approximately 15 feet to 24 feet below ground surface. A ground water well is located 500 feet from the disposal area on the discharger's property.

9. The ground water flows northeasterly beneath the site and then westerly, eventually flowing into Hill Slough. Hill Slough is contiguous with Grizzly and Suisun Bay.

10. Surface runoff from the Potrero Hills located south of the disposal area is diverted from the disposal area via a 1-1/2 foot high berm at the southern edge of the disposal area, and is then directed around the disposal area via a diversion ditch.

11. Beneficial uses of the usable ground water found beneath the site and surrounding areas and of Hill Slough and Suisun Bay are:

    a. Municipal and domestic water supply
    b. Agricultural supply
    c. Water contact recreation
    d. Non-contact water recreation
    e. Warm fresh water habitat
    f. Wildlife habitat
    g. Estuarine habitat
    h. Preservation of rare and endangered species
    i. Fish migration and spawning

12. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986, and this Order implements the water quality objectives stated in that plan.

13. The Solano County Planning Department has prepared a Negative Declaration in accordance with the California Environmental Quality Act. The Regional Board has reviewed the project and concurs with the Committee finding that the operation will not have a substantial adverse impact on the environment.

14. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge.

15. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the discharger, and any other person(s) that operates this site, shall meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and also comply with the following:

A. Waste Disposal Prohibitions

1. The disposal of waste shall not create a pollution or nuisance as defined in Section 13050 of the California Water Code.

2. The discharge of wastes other than dog and cat remains shall be prohibited.

3. Wastes shall not be placed in or allowed to contact ponded or flowing water from any source whatsoever.

4. The erosion of deposited waste materials from the disposal area(s) shall be prevented.

5. The disposal of waste shall not degrade the quality of the ground water.

B. Waste Disposal Specifications

1. The site shall be operated to ensure that all wastes will be a minimum of 5 feet above the highest anticipated elevation of underlying usable ground water with the excavated pits being no deeper than 10 feet.

2. The discharger shall operate the waste management facility so as not to cause a statistically significant difference to exist between water quality at the compliance points and the Water Quality Protection Standards (WQPS) that will be determined after one year's worth of quarterly monitoring data. The compliance points are identified as wells MW-2, MW-3 and MW-4. The background well is identified as MW-1.

   Water Quality Protection Standards shall be determined for the following parameters:

   a. pH
   b. Electrical Conductivity (micromhos/cm)
   c. Total Kjeldahl Nitrogen (mg/l)
   d. Nitrate, (as N) (mg/l)
   e. Total Organic Carbon (mg/l)
   f. Total Coliform (MPN/100ml)

3. At the time of disposal, the remains shall be covered with at least 12 inches of soil. In addition, each completed pit shall have an interim cover of at least 24 inches.

4. All completed disposal areas shall be covered with a minimum of 4 feet of cover and meet other applicable requirements as described in Article 8 of Subchapter 15.

5. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.

6. An uphill drainage diversion ditch shall be constructed prior to placement of any waste in any new expansion area. In addition, the landfill shall be graded, and maintained, so as to promote lateral runoff of precipitation and prevent ponding of water on the landfill.

C. Provisions

1. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operation personnel.

2. The discharger shall comply with all Prohibitions, Specifications, and Provisions of this Order upon adoption of this Order by the Board except Specification B.2.

3. To comply with Provision 2., the discharger shall submit quarterly monitoring reports in accordance with the attached self-monitoring program, beginning three months after the adoption of this Order. After one years worth of monitoring data, the WQPS's shall be established for the parameters listed in Specification B.2. and the frequency of monitoring reduced if warranted.

4. The use of any additional area outside the existing active disposal area as shown on Attachment "A" shall not commence without written approval of the Executive Officer. This approval shall be based on a demonstration that the area will comply with all applicable specifications of this Order.

5. The discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries of the disposal area or the ownership of the disposal site.

6. Six months prior to discontinuing the use of this site for waste disposal, the discharger shall submit a closure plan that will provide for the closure of the landfill according to the requirements of Articles 5 and 8 of Subchapter 15. The closure plan should include plans to cover the landfill and provide for the elimination of ponded water on the landfill. This plan shall include an amended Report of Waste Discharge for the purpose of revising this Order to reflect the site closure and to obtain Board approval of the closure plan and establish water quality protection standards according to the requirements of Article 5 of Subchapter 15. This submittal shall include the locations of two monuments that have been constructed to be used to determine the location and elevation of wastes at the site. This report shall also provide evidence of an irrevocable closure fund, or other means, pursuant to Section 2580 (f) of Subchapter 15 to ensure that there are sufficient funds available for the closure and post-closure maintenance and monitoring of this site.

7. This Board considers the property owner to have a continuing responsibility for correcting any problems which may arise in the future as a result of this waste discharge to this property during the subsequent use of the land for other purposes.

8. The discharger shall permit the Regional Board:

   (a) Entry upon premises on which wastes are located at which any required records are kept,

   (b) Access to copy any records required to be kept under terms and conditions of this Order,

   (c) Inspection of monitoring equipment or records, and

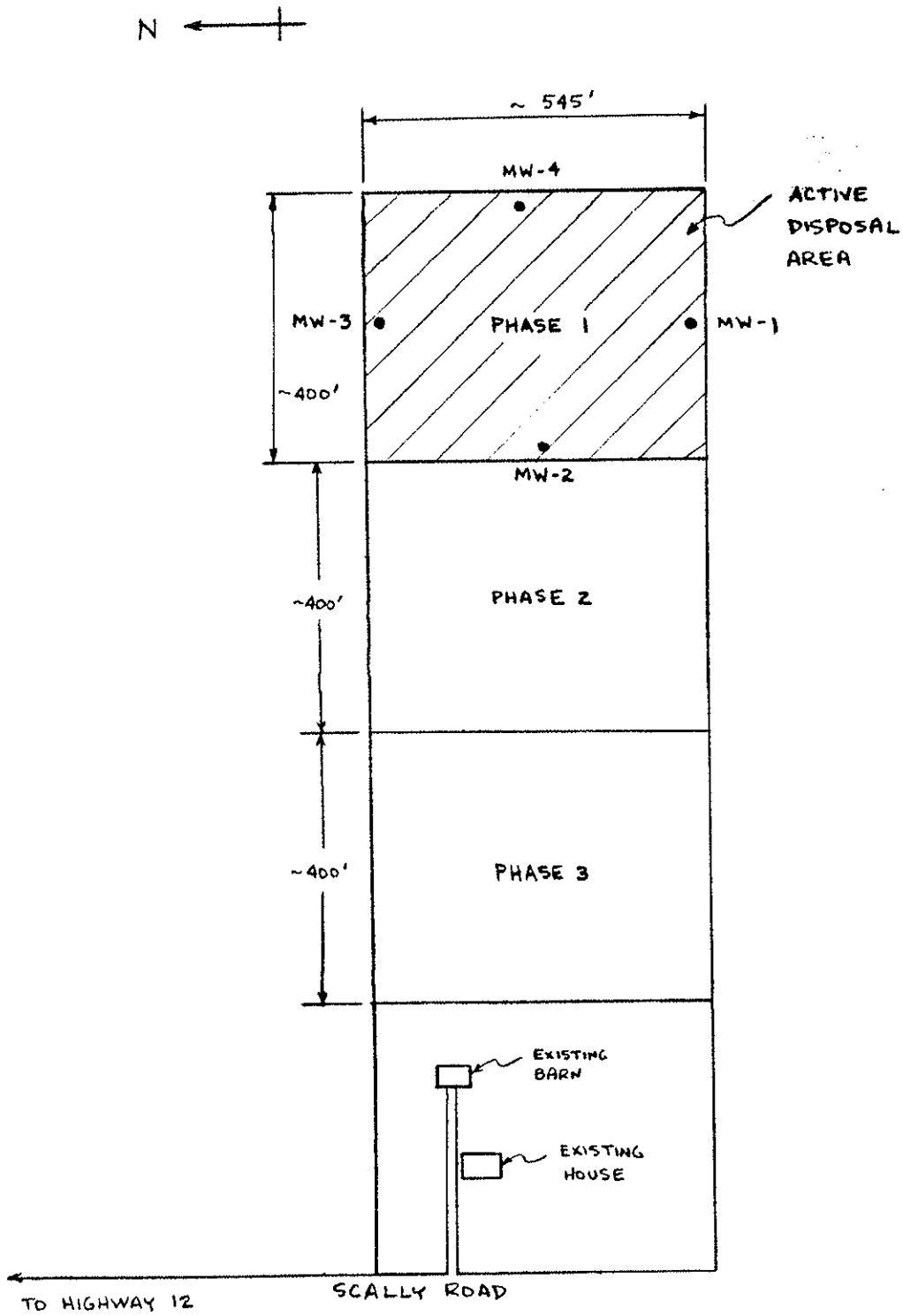
   (d) Sampling of any discharge.

9. These requirements do not authorize commission of any act causing injury to the property of another or of the public; do not convey any property rights; do not remove liability under federal, state, or local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or organizations.

I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on August 19, 1987.

Roger B. James
Executive Officer

Attachment:
Attachment A (Map)



STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

Attachment A:

Location of Disposal Areas
Tonnesen Pet Cemetary
Solano County

DRAWN BY: MTC	DATE: 6-15-87	DRWG. NO.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

TONNESEN PET CEMETERY

SUISUN CITY, SOLANO COUNTY

ORDER NO. 87-105

CONSISTS OF

PART A

AND

PART B

PART A

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16. This Self-Monitoring Program is issued in accordance with Section C.3 of Regional Board Order No. 87-105.

The principal purposes of a self-monitoring program by a waste discharger are: (1) to document compliance with waste discharge requirements and prohibitions established by the Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analysis shall be performed according to the most recent version of Standard Methods for the Analysis of Wastewater and in accordance with an approved sampling and analysis plan.

Water and waste analyses shall be performed by a laboratory previously approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his laboratory and shall sign all such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.

2. Receiving waters refers to any water which actually or potentially receives surface or groundwaters which pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the disposal area, the surface runoff from the site, the drainage ditches surrounding the site, Hill Slough, Grizzly Bay and Suisun Bay are considered the receiving waters.

3. Standard Observations refer to the following:

    a. Receiving Waters

        1) Floating and suspended materials of waste origin: presence or absence, source, and size of affected area.

2) Discolorization and turbidity: description of color, source, and size of affected area.

3) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

4) Evidence of beneficial use: presence of water associated wildlife.

5) Flow rate.

b. Weather conditions: wind direction and estimated velocity , total precipitation during the previous five days and on the day of observation.

c. Perimeter of the waste management unit.

1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate. (Show affected area on map)

2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

3) Evidence of erosion and/or daylighted waste.

d. The waste management unit.

1) Evidence of ponded water at any point on the waste management facility.

2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

3) Evidence of erosion and/or daylighted waste.

D. SCHEDULE OF SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the requirements of Article 5 of Subchapter 15, Chapter 3, Title 23, of the California Administrative Code (Subchapter 15). Ground water sampling shall be quarterly for 4 monitoring periods after the adoption of this Order, and then reduced if warranted thereafter, for the establishment of background Water Quality Protection Standards (WQPS).

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any resolved litigation regarding

this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number.

2. Date and time of sampling and/or observations.

3. Date and time that the analyses are started and completed, and the name of the personnel performing the analyses.

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A Section B is satisfactory.

5. Calculation of results.

6. Results of analyses, and detection limits for each analyses.

F. REPORTS TO BE FILED WITH THE BOARD

1. Written self-monitoring reports shall be filed by the 15th day of the month following the report period. In addition an annual report shall be filed as indicated in F.2. The reports shall be comprised of the following:

   a. Letter of Transmittal

      A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations, such as, operation and/or facilities modifications. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondance transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

   b. Each monitoring report shall include a compliance evaluation summary sheet. This sheet shall contain:

      1) The sample mean and the sample variance for all compliance points, and shall determine if the difference between the mean of each sample set and the water

quality protection standard is significant at the 0.05 level using Cochran's Approximation to the Behrens-Fisher Student's t-tests described in Appendix II of Subchapter 15. The discharger may propose an alternative statistical procedure to be used in making this determination pursuant to Section 2555(h)(3) of Subchapter 15. If a statistically significant difference is found this shall be reported as a suspected requirement violation in the letter of transmittal.

2) A graphic description of the velocity and direction of ground water flow under/around the waste management unit, based upon the past and present water level elevations and pertinent visual observations.

3) A graphic description showing the relationship between the depth of ground water and the depth of the excavations during the monitoring period.

4) Results of analyses and observations specified in Part B must be included with each report. The laboratory director shall sign the laboratory statement of analytical results.

c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

2. CONTINGENCY REPORTING

A. A report shall be made in writing to the Board within seven days if a statistically significant difference is found between a self-monitoring sample set and a WQPS. Notification shall indicate when WQPS(s) have been exceeded. The discharger shall immediately resample at the compliance point(s) where this difference has been found and analyze another sample set of at least four portions split in the laboratory from the source sample.

B. If resampling and analysis confirms the earlier finding of a statistically significant difference between self-monitoring results and WQPS(s) the discharger must submit to the Board within 90 days and amended Report of Waste Discharge for establishment of a verification monitoring program meeting the requirements of Section 2557 of Subchapter 15. This submittal shall include the information required in Section 2556(b)(2) of Subchapter 15.

C. The discharger must notify the Board within seven days if the verification monitoring program finds a statistically significant difference between samples from the verification monitoring program point of compliance and WQPS(s).

D. If such a difference or differences are found by the

verification monitoring program, it will be concluded that the discharger is out of compliance with this Order. In this event the discharger shall submit within 180 days an amended Report of Waste Discharge requesting authorization to establish a corrective action program meeting the requirements of Section 2558 of Subchapter 15. This submittal shall include the information required in Section 2557(g)(3) of Subchapter 15.

3. By January 31 of each year the discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

   a. Tabular and graphical summaries of the monitoring data obtained during the previous year.

   b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.

   c. A map showing the area,if any, in which filling has been completed during the previous calendar year.

   d. A written summary of the ground water analyses indicating any change in the quality of the ground water.

4. A boring log shall be submitted for each sampling well established for this monitoring program, as well as a report of inspection or certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 30 days after well installation.

   a. For all monitoring wells established for this program continuous core samples must be taken in all borings, unless multiple wells are to be constructed in the immediate vicinity, in which case only the deepest boring would need to be continuously sampled. Each boring log must include the name, registration number and signature of the supervising geologist, the name of the person actually logging the hole, the name of the drilling company, type of drilling equipment used, grain size distribution analysis, soil moisture content, blow count, sample recovery rate, initial and stabilized water levels, in-place permeability, and ground surface elevation. Soil samples should be retained for chemical analyses in case polluted ground water is found.

   b. For all monitoring wells established for this program, well construction details must include a sieve analysis of the formation and sand pack; the rationale for the selected slot size and sand pack; and the method used to place the sand pack, seal, and grout. Wells must be screened over the full length of the aquifer, and the sand pack cannot exceed more

than one foot above the screened interval. A two to four foot concrete sanitary seal is usually specified in the county permit. All wells must be surveyed to a clearly marked common reference point.

Part B

I. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

A. WASTE MONITORING

1. Record the number of animals buried and total volume of fill disposed of at the site each month. Report this information quarterly.

2. Provide a sketch or map showing the locations of the filled areas of disposal during the monitoring period. Report this information quarterly.

3. Record the depth of each excavation during the monitoring period. Report this information quarterly.

4. Provide a sketch showing the relationship between the depth of ground water and depth of excavations during the monitoring period. Report this information quarterly.

All on-site and ground water analyses, observations, and examinations shall be performed according to the specifications shown in Table I.

B. ON-SITE OBSERVATIONS

Station	Description
V-1 thru V-'n'	Located on the waste disposal site as delineated by a 500 foot grid network.
P-1 thru P-'n' (perimeter)	Located at equidistant intervals not exceeding 500 feet around the perimeter of the disposal area.

C. GROUND WATER MONITORING

Station	Description
MW-1 thru MW-'n'	Located as shown on the attached map.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 87-105.

2. Is effective on the date shown below.

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the discharger.

Roger B. James
Executive Officer

August 19, 1987
Date Ordered